MAJOR ACQUISITION PROGRAMS

Aviation Combat Element Programs

Part 3

MV-22 Osprey

Description

The MV-22 Osprey tilt-rotor is an advanced-technology vertical/short takeoff and landing (V/STOL), multi-purpose tactical aircraft that will replace the current fleet of Vietnam era CH-46E and CH-53D aircraft. The MV-22 will join the Expeditionary Fighting Vehicle (EFV) and Landing Craft Air Cushion (LCAC) as an integral part of the Seabasing pillars necessary to execute Expeditionary Maneuver Warfare (EMW). Specific missions include expeditionary assault from land or sea, raid operations, medium cargo lift, tactical recovery of aircraft and personnel (TRAP), fleet logistics support, and special warfare. The MV-22's design incorporates the sophisticated, but mature technologies of composite materials, fly-by-wire flight controls, digital cockpits, airfoil design, and advanced manufacturing processes. The MV-22 Osprey is capable of carrying 24 combat-equipped Marines or a 10,000-lb. external load, and has a strategic self-deployment capability with a 2,100 nautical-mile range with single aerial refueling. The MV-22's prop-rotor system and engine/transmission nacelle, which is 38 feet long and mounted on each wing tip, allow it to operate as a helicopter for takeoff and landing. Once airborne, the nacelles rotate forward 90 degrees, converting the MV-22 into a high-speed, high-altitude, fuel-efficient, turbo-prop aircraft. The MV-22 is a multi-mission aircraft designed for use by all the services. The Marine Corps, Navy, and Air Force are committed to the fielding of this unique aircraft. Procurement of the MV-22 remains the Marine Corps' No. 1 aviation acquisition priority.

Operational Impact

The MV-22 will be the cornerstone of Marine Corps' assault support capability, possessing the speed, endurance, and survivability needed to fight and win on tomorrow's battlefield. This combat multiplier represents a quantum improvement in strategic mobility and tactical flexibility for expeditionary and Prepositioning Maritime Forces (MPF).

Program Status

The Integrated Test Team (ITT) at

Naval Air Station, Patuxent River, MD, Edwards Air Force Base, CA, and the Bell facility in Amarillo, TX and VMX-22 (an independent test organization) have flown more than 4,600 hours. VMX-22 currently has fifteen aircraft and is taking delivery of new MV-22s every month, as the squadron continues to train pilots in preparation for the Operational Evaluation in Spring 2005. The squadron recently completed an Operational Assessment of the MV-22, during which all events the squadron had planned for the aircraft were completed on or ahead of schedule. One of the events completed during the assessment was external lift and transport of the new lightweight 155 howitzer at 69 nautical miles, which exceeds the Key Performance Parameter. Rigorous developmental flight-testing continues and constitutes the *most extensive testing* of helicopter flight phenomena ever undertaken.

MV-22 aircraft will be produced in three blocks:

Block A series provide an improved aircraft with which the Marine Corps can train and fight. This includes a software enhancement and nacelle reconfiguration, plus additional reliability and maintainability (R&M) improvements.

Block B series aircraft provide further *improvements in effectiveness and suitability* for operators and maintainers, including better access to the nacelle for inspection purposes and substantial R&M advancements.

Block C configuration incorporates *mission enhancements*.

Procurement Profile:	FY 05	FY 06
Quantity:	8	9

Developer/Manufacture:

Bell Helicopter Textron, Fort Worth, TX

The Boeing Company, Philadelphia, PA